

Notice of Allowability

Application No.

09/744,852

Applicant(s)

FROHBERG, CLAU S

Examiner

Russell Kallis

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 2/12/2004.
2. ☒ The allowed claim(s) is/are 1-5,7-16,18-21,26 (renumbered 1-20).
3. ☒ The drawings filed on 05 June 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☒ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 4/15/2004.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Anne-Marie Yvon on 4/15/2004.

The application has been amended as follows:

Please cancel Claim 17.

In the Claims:

Claim 1 (currently amended). An isolated nucleic acid molecule encoding a protein with the function of a potato β -amylase, selected from the group consisting of:

- a) a nucleic acid molecule encoding the amino acid sequence of SEQ ID NO: 2;
- b) a nucleic acid molecule having the nucleotide sequence of SEQ ID NO: 1;
- c) a nucleic acid molecule which hybridizes with, or is complementary to, the

nucleic acid molecules stated under a) or b), wherein hybridization is performed at a temperature of 68° C in buffer comprising 2X SSC or 7% SDS[;] and is followed by a wash at 68° C in a wash buffer containing 0.2X SSC; and

d) a nucleic acid molecule whose nucleotide sequence deviates from the sequence of the nucleic acid molecule stated under a)-c) owing to the degeneracy of the genetic code.

Art Unit: 1638

Claim 2 (currently amended). A recombinant nucleic acid molecule containing:

- a) the nucleic acid molecule encoding a protein with the function of a potato β -amylase as claimed in claim 1, and
- b) one or more nucleotide sequences which encode one or more proteins, wherein the one or more proteins are selected from the group consisting of branching enzymes, ADP glucose [pyrophosphorylases] pyrophosphorylases, granule-bound starch synthases, soluble starch synthases, debranching enzymes, disproportioning enzymes, plastid starch [phosphorylases] phosphorylases, R1-enzymes, amylases, and glucosidases; or nucleic acid molecules which hybridize with said nucleotide sequences, wherein hybridization is performed at a temperature of 68° C in buffer comprising 2X SSC or 7% SDS[.] and is followed by a wash at 68° C in a wash buffer containing 0.2X SSC.

In Claim 9, line 1, after “comprising the” insert --recombinant--.

Claim 10 (currently amended). A vector comprising [a] the recombinant nucleic acid molecule as claimed in claim 2, further comprising nucleotide sequences which encode a plurality of proteins selected from [group A] the group consisting of branching enzymes, ADP glucose pyrophosphorylases, granule-bound starch synthases, soluble starch synthases, debranching enzymes, disproportioning enzymes, plastid starch phosphorylases, R1-enzymes, amylases, and glucosidases; or nucleic acid molecules which hybridize with said nucleotide sequences, wherein hybridization is performed at a temperature of 68° C in buffer comprising 2X SSC or 7% SDS and is followed by a wash at 68° C in a wash buffer containing 0.2X SSC,

Art Unit: 1638

wherein at least one nucleotide sequence is in sense orientation and at least one nucleotide sequence is in antisense orientation.

In Claim 11, line 2, after “which” insert --nucleic acid molecule-- and after “is” insert --operably--.

Claim 12 (currently amended). A host cell which is transformed with the nucleic acid molecule as claimed in any one [or more] of claims 1-5₁ or with a vector as claimed in any one [or more] of claims 7-11₁ or a cell which is derived from the host cell[.] and which contains said nucleic acid molecule or said vector.

In Claim 13, line 3, before “one” insert --any--; and delete “or more” after “one”.

In Claim 13, line 3, after “claimed in” insert --any one of--.

In Claim 13, line 3, delete “claim” and insert --claims--.

Claim 20 (currently amended). Propagation material of the plant as claimed in claim 16[.], wherein said propagating material comprises said nucleic acid molecule or said vector.

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

Application/Control Number: 09/744,852

Page 5

Art Unit: 1638

The oath or declaration is defective because: The oath recites an improper filing date of January 30, 2001; rather than the correct filing date of May 31, 2001; for the instant application. See also Form PCT/DO/EO/903 mailed June 19, 2001, which recites the correct filing date under item 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kallis whose telephone number is (571) 272-0798. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (571) 272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russell Kallis Ph.D.
April 15, 2004


for David Fox

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